

AMENDMENTS TO THE CLAIMS

Please cancel claims 12-19 without prejudice to or disclaimer of the subject matter stated therein. Please add new claims 22-31, as indicated below. Please amend claims 2-11 and 21, as indicated below.

1. (Original) An oligonucleotide inhibitor, or an analogue thereof, comprising from about 7 to about 100 nucleotides complementary to a mammalian MBD2/demethylase mRNA, wherein said oligonucleotide inhibitor, or analogue thereof, inhibits expression of a mammalian MBD2/demethylase gene.
2. (Currently amended) The oligonucleotide inhibitor, or analogue thereof, according to claim 1 that is an antisense oligonucleotide.
3. (Currently amended) The oligonucleotide inhibitor, or analogue thereof, according to claim 1 that is a siRNA molecule.
4. (Currently amended) The oligonucleotide inhibitor, or analogue thereof, according to claim 1 that is a ribozyme.
5. (Currently amended) The ~~An~~ oligonucleotide inhibitor, or an analogue thereof, according to claim 1, wherein said oligonucleotide inhibitor, or analogue thereof, of less than about 100 nucleotides in length comprises ~~comprising~~ at least 7 consecutive nucleotides from the sequence as set forth in any one of SEQ ID NOs: 5, 6, 7, 8, 9, 10, 11 or 12.

6. (Currently amended) The oligonucleotide inhibitor according to ~~any one of claims~~ claim 1, wherein said oligonucleotide inhibitor ~~to 5 further comprises~~ comprising one or more phosphorothioate backbone linkages.
7. (Currently amended) The oligonucleotide inhibitor according to claim ~~any one of claims~~ 1, wherein said oligonucleotide inhibitor ~~to 6 further comprises~~ comprising one or more 2'-O-methyl modified bases.
8. (Currently amended) A vector comprising a sequence encoding the oligonucleotide inhibitor according to claim ~~any one of claims~~ 1 to 5.
9. (Currently amended) A host cell transformed or transfected with the oligonucleotide according to claim ~~any one of claims~~ 1 to 5, or the vector according to claim 8.
10. (Currently amended) A pharmaceutical composition comprising the oligonucleotide inhibitor according to claim ~~any one of claims~~ 1 to 7, or the vector according to claim 8.
11. (Currently amended) Use ~~A use~~ of the oligonucleotide inhibitor according to claim ~~any one of claims~~ 1 to 7, or the vector according to claim 8, in the manufacture of a medicament.
12. (Canceled)
13. (Canceled)
14. (Canceled)

15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Original) A method of identifying target genes for cancer therapy comprising treating a cell with one or more oligonucleotide inhibitor of a mammalian MBD2/demethylase gene, analysing gene expression in the treated cell and comparing the gene expression with gene expression in a control cell not treated with said oligonucleotide inhibitor, wherein a difference in gene expression between the treated cell and the control cell is indicative of one or more target gene.
21. (Currently amended) The method according to claim 20 ~~19~~, wherein analysing gene expression is conducted by microarray analysis.
22. (New) A method for inhibiting expression of a mammalian MBD2/demethylase gene in a mammal comprising administering a therapeutically effective amount of an oligonucleotide inhibitor, or an analogue thereof, comprising from about 7 to about 100 nucleotides complementary to a mammalian MBD2/demethylase mRNA to said mammal, wherein said

oligonucleotide inhibitor or analogue thereof inhibits expression of a mammalian MBD2/demethylase gene.

23. (New) The method according to claim 22, wherein said oligonucleotide inhibitor, or analogue thereof, comprises at least 7 consecutive nucleotides from the sequence as set forth in any one of SEQ ID NOs: 5, 6, 7, 8, 9, 10, 11 or 12.
24. (New) The method according to claim 22, wherein said mammal is a human.
25. (New) A method for treating or preventing cancer in a mammal comprising administering a therapeutically effective amount of an oligonucleotide inhibitor, or an analogue thereof, comprising from about 7 to about 100 nucleotides complementary to a mammalian MBD2/demethylase mRNA to said mammal, wherein said oligonucleotide inhibitor or analogue thereof inhibits expression of a mammalian MBD2/demethylase gene.
26. (New) The method according to claim 25, wherein said oligonucleotide inhibitor, or analogue thereof, comprises at least 7 consecutive nucleotides from the sequence as set forth in any one of SEQ ID NOs: 5, 6, 7, 8, 9, 10, 11 or 12.
27. (New) The method according to claim 25, wherein said oligonucleotide, or analogue thereof, inhibits cancer cell growth.
28. (New) The method according to claim 25, wherein said oligonucleotide, or analogue thereof, inhibits cancer cell proliferation.

29. (New) The method according to claim 25, wherein said cancer is lung cancer or colorectal cancer.
30. (New) The method according to claim 25, wherein said method is for preventing a familial cancer.
31. (New) The method according to claim 25, wherein said mammal is a human.